On-line Table: Summary of statistical comparisons between histopathologic and DCE-MRI measures[a]

Histopathologic Features/ MRI Measure	K^{trans} (min^{-1})	v_e (Unitless)	v_p (Unitless)	$EnF_{IAUC60>0}$ (Unitless)	$EnF_{IAUC60>2.5}$ (Unitless)
Necrosis					
Frank	0.005[b]	0.694	0.694	0.264	0.088
Geographic	0.495	0.655	0.466	0.384	0.796
Cell density	0.392	0.165	0.953	0.455	0.169
Cell atypia	0.958	0.629	0.654	0.630	0.149
Mitotic activity	0.400, $\rho = 0.166$	0.012,[c] $\rho = 0.470$	0.678, $\rho = -0.082$	0.729, $\rho = -0.069$	0.744, $\rho = 0.065$
Infiltrates					
Lymphocytes	0.353	0.147	0.911	0.629	0.393
Macrophages	0.629	0.738	0.683	0.629	0.970
Tumor vascular patterns					
Hypertrophy	0.592	0.592	0.153	0.422	0.212
Hyperplasia	0.569	0.787	0.197	0.787	0.418
Glomeruloid	0.394	0.504	0.504	0.134	0.596
Granulation tissue	0.325	0.896	0.896	0.015	0.076
Large vessel	0.164	0.164	0.137	0.848	0.502
Thrombosis	0.472	0.924	0.632	0.472	0.811
Sclerosed	0.293	0.095	0.155	0.951	0.122
Histologic patterns					
Fibrillar	0.325	0.007[b]	0.325	0.793	0.212
Gemistocytic	0.937	0.442	0.614	0.730	0.353
Oligodendroglial	0.155	0.353	0.757	0.155	0.155
Sarcomatous	0.929	0.789	0.929	0.372	0.592
Giant cells	0.697	0.697	0.976	0.787	0.610
Small cells	0.970	0.683	0.911	0.738	0.738
Overall vascular score	0.125	0.759	0.385	0.214	0.278
Vascular measures					
ESA ratio	0.839, $\rho = 0.041$	0.809, $\rho = -0.049$	0.493, $\rho = -0.0138$	0.344, $\rho = -0.189$	0.799, $\rho = -0.051$
VSA ratio	0.919, $\rho = 0.020$	0.855, $\rho = -0.037$	0.495, $\rho = -0.137$	0.298, $\rho = -0.208$	0.782, $\rho = -0.056$
VPC (mm^{-2})	0.224, $\rho = 0.242$	0.626, $\rho = -0.098$	0.119, $\rho = 0.307$	0.065, $\rho = 0.360$	0.071, $\rho = 0.353$

Note:—VPC indicates vascular profile count per square millimeter; VSA, vascular surface area; ESA, endothelial surface area.

[a] Mann-Whitney *U* tests were used for histologic parameters, which produce a binary classification (necrosis, infiltrates, vascular patterns, and histologic patterns), and multivariate analysis of variance was used for histologic features, which produces categoric scores (cell density, cell atypia, and overall vascular score). Spearman correlation analysis was performed to assess the relationship between MR imaging–derived parameters and quantitative histologic measures (mitotic activity, ESA, VSA, and VPC). Significance levels are shown, and Spearman ρ is shown for correlation analyses.

[b] Significance was $P < .01$ (Mann-Whitney *U* and MANOVA).

[c] Significance was $P < .05$ (Spearman correlation analysis).